

4 Header

Overview

Header is present in response and request messages between Zabbix components. It is required to determine the length of message. The header consists of:

```
<PROTOCOL> - "ZBXD" (4 bytes).
<FLAGS> - the protocol flags, (1 byte). 0x01 - Zabbix communications
protocol, 0x02 - compression).
<DATALEN> - data length (4 bytes). 1 will be formatted as 01/00/00/00 (four
bytes, 32 bit number in little-endian format).
<RESERVED> - reserved for protocol extensions (4 bytes).
```

When compression is enabled (0x02 flag) the <RESERVED> bytes contains uncompressed data size, 32 bit number in little-endian format.

To not exhaust memory (potentially) Zabbix protocol is limited to accept only 128MB in one connection.

Implementation

Here are code snippets showing how to add Zabbix protocol header to the data you *want* to send in order to obtain packet you *should* send to Zabbix so it is interpreted correctly.

Language	Code
bash	<pre>printf -v LENGTH '%016x' "\${#DATA}" PACK="" for ((i=14; i>=0; i-=2)); do PACK="\$PACK\x\${LENGTH:\$i:2}"; done printf "ZBXD\1\$PACK%s" "\$DATA"</pre>
Java	<pre>byte[] header = new byte[] { 'Z', 'B', 'X', 'D', '\1', (byte)(data.length & 0xFF), (byte)((data.length >> 8) & 0xFF), (byte)((data.length >> 16) & 0xFF), (byte)((data.length >> 24) & 0xFF), '\0', '\0', '\0', '\0'}; byte[] packet = new byte[header.length + data.length]; System.arraycopy(header, 0, packet, 0, header.length); System.arraycopy(data, 0, packet, header.length, data.length);</pre>
PHP	<pre>\$packet = "ZBXD\1" . pack('P', strlen(\$data)) . \$data; or \$packet = "ZBXD\1" . pack('V', strlen(\$data)) . "\0\0\0\0" . \$data;</pre>
Perl	<pre>my \$packet = "ZBXD\1" . pack('<Q', length(\$data)) . \$data; or my \$packet = "ZBXD\1" . pack('V', length(\$data)) . "\0\0\0\0" . \$data;</pre>
Python	<pre>packet = "ZBXD\1" + struct.pack('<Q', len(data)) + data</pre>

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